

Application No. 09/884,406
Amendment Dated February 3, 2005
Reply to Office Action of November 3, 2004

REMARKS

This Response is in response to the Office Action mailed November 3, 2004 in respect to this application. This Response is being filed within the 3-month shortened statutory period set for response in the Office Action. Claims 1 and 12 are amended by the present amendment. Claims 2-4, 6, 8-10, 14-16, 18 and 20 were previously withdrawn from consideration. Claims 2-3 and 14-15 are canceled by the present amendment. Claims 1, 5, 7, 11-13, 17 and 19 are pending and are not withdrawn in this application subsequent to the present Amendment.

ELECTION/RESTRICTION:

The applicant acknowledges that that the Examiner has maintained the restriction requirement of the previous Office Action.

REJECTION UNDER 35 U.S.C. § 102(e):

The Examiner rejected claims 1, 5, 7, 12-13, 17 and 19 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,125,131 (Brandes et al.) This rejection is traversed for the reasons that follow. The rejection here is substantially the same as that of the Office Action dated April 7, 2004 except that claim 11 is not included in the present rejection.

In the Examiner's Response to Arguments section, the Examiner stated that he disagreed with the applicant's argument that Brandes et al. do not teach that the purification media is located adjacent to the gas outlet conduit. The Examiner stated that the pending claims must be given their broadest reasonable interpretation. The Examiner states that since DICTIONARY.COM defines adjacent as "close to," applying the test of *In re Prater*, 415 F.2d

1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969), Brandes et al. teach a purification media (at FIG. 1, item 14) that is located close to the outlet of the conduit (FIG. 1, item 19).

Here, it is first noted that it appears that the Examiner has misinterpreted the drawing of Brandes et al. The Examiner points to the purification media as Figure 1, item 14. However, item 14 of figure 1 is "a bed 14 of sorbent material 16." It appears that the Examiner has incorrectly interpreted item 14 as the empty part of the interior volume 11 above the sorbent material. In fact, this is merely empty space. Note the arrow head on call-out 14.

Claim 1 includes a limitation that "any gas desorbed from said sorbent medium must pass through and contact said at least one layer of purification media prior to exiting said vessel through said outlet conduit." As shown in FIG. 1 of the Brandes patent, any gas located in its empty part of interior volume 11 will not pass through the sorbent material 16. This gas may contain impurities. The Brandes patent does not teach or suggest purifying the gas in this space since, as can be seen in FIG. 1 of Brandes, the port 19 is located well above the level of the sorbent material 16.

Additionally, to further clarify that which the applicant believes to be his invention, the applicant has amended claim 1 to include the limitation that the "purification media is a media selected from the group consisting of catalyst based media and adsorbent based media." Support for this claim amendment can be found at, for example, page 7, lines 20-23 and page 9, lines 2-5.

Additionally, no discussion that the layers of purification media must be adjacent to the gas outlet of the conduit such that the gas must contact the purification media prior to exiting the vessel was made by Brandes et al. Specifically, independent claim 1 requires a purifier that includes at least one layer of purification media that is located adjacent to the gas outlet conduit

of the vessel where the desorbed gas must pass through at least one layer of purification media. No discussion of layers of purification media was made by Brandes et al. Additionally, no discussion that the layers of purification media must be adjacent to the gas outlet of the conduit such that the gas must contact the purification media prior to exiting the vessel was made by Brandes et al.

It is believed that the only mention of purification whatsoever by Brandes et al. is at col. 6, lines 29-34. Here, Brandes et al. state:

The apparatus of the invention optionally may be constructed with a solid phase physical sorbent medium being present in the storage and dispensing vessel together with a chemisorbent material having a sorptive affinity for contaminants, e.g., decomposition products, of the sorbate fluid therein.

Based on this paragraph, Brandes et al. do not teach or suggest layers of catalyst based or adsorbent based purification media that are adjacent to the gas outlet of the conduit, as claimed in the independent claims (claims 1 and 12) of the present application. As stated above, Brandes et al. teach a "solid phase physical sorbent medium" together with a "chemisorbent material." A chemisorbent based purification media is not a catalyst based or adsorbent based purification media. In chemisorbent based purification media, binding of a liquid or gas occurs on the surface or in the interior of a solid by chemical bonds or forces, *i.e.*, by chemical reaction. In adsorption based purification media, physical adhesion of gases or liquid molecules occurs on the surface of solids or liquids with which they are in contact. In catalyst based purification media, a substance is used that increases the rate of a chemical reaction without being consumed in the reaction. Chemisorption based purification media function in an entirely different manner than either adsorption based or catalyst based purification media. Brandes et al. only teach use of chemisorbent material. No teaching or

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suggestion of catalyst based or adsorption based purification media is taught or suggested in any way. Since dependent claims 5 and 7 depend from claim 1, it is respectfully requested that the Examiner also pass claims 5 and 7 to allowance.

Moreover, with respect to claim 5, the Examiner stated that he disagreed with the applicant in the applicant's argument that Brandes et al. does not teach the claim 5 limitation of a "purifier conduit." Citing column 5, lines 15-26, the Examiner stated that FIG. 1, item 19 teaches this limitation which is a "frit or other filter means" attached to the port. A filter or a frit is a porous material through which a liquid or gas is passed to separate the fluid from suspended particles. That is, a frit or filter physically blocks particulates. The present invention, as defined by the amended claims, operates entirely differently – by use of either (1) a catalyst or (2) by use of an adsorbent. See the discussion above.

Independent claim 12, as amended, includes substantially the same limitations as that of amended independent claim 1 with respect to the purifier comprising at least one layer of purification media located adjacent to the gas outlet conduit, that it is a separate layer from the sorbent medium, that any gas desorbed from the sorbent medium must pass through the purification media prior to exiting said vessel, and that the purification media is either catalyst based media or adsorbent based media. For the reasons stated above with respect to claim 1, independent claim 12 should also be allowable. Additionally, since claim 12 is allowable and claims 13, 17 and 19 depend from claim 12, all of claims 12, 13, 17 and 19 should be allowable.

It is therefore respectfully requested that the Examiner withdraw the rejection under 35 U.S.C. § 102(e) and pass claims 1, 5, 7, 12-13, 17, 19, as amended, to allowance and issuance.

REJECTION UNDER 35 U.S.C. § 103(a):

The Examiner rejected claim 11 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,125,131 (Brandes et al.).¹ The Examiner states that Brandes et al. teach an adsorbent based gas delivery system comprising a storage and dispensing vessel and a purifier comprising a purification media generally homogeneously mixed with the sorbent medium in the interior section of the storage and dispensing vessel such that substantially any gas desorbed from the sorbent medium must pass through and contact the purification media prior to exiting the vessel through the outlet conduit. The Examiner goes on to state that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the sorbent and chemisorbent material to be homogenous in order to ensure the fluid components are sorptively retained. That is, citing *In re Boesch*, 205 USPQ 215 (CCPA 1990), the Examiner states, it would have been obvious to one of ordinary skill in the art at the time of the invention to choose the instantly claimed arrangement through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable arrangement involves only routine skill in the art.

In independent claim 11, as amended, the following limitations are required:

a purifier comprising a purification media generally homogeneously mixed with said sorbent medium in the interior section of said storage and dispensing vessel such that substantially all gas desorbed from said sorbent medium must pass through and contact said purification media prior to exiting said vessel through said outlet conduit.

Claim 11, as amended, includes a limitation that the purification media must be generally homogeneously mixed with the sorbent material. Again, Brandes et al. merely teach that a

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chemisorbent material is present together with a solid-phase sorbent medium. No further specifics are given and no mention of a homogeneous mix is stated.

Additionally, claim 11 requires that substantially all gas desorbed from the sorbent medium must pass through and contact the purification media. Again, Brandes et al. do not teach this feature because of the empty volume above the sorbent medium, as discussed above.

The rejection under 35 U.S.C. § 102(e) should be withdrawn.

No new matter has been added by the present amendments to the claims.

The prior art that is of record, but not specifically relied upon by the Examiner, is deemed by applicant to be less relevant than that art specifically cited.


¹ Here, the applicant believes that the Examiner inadvertently stated "Claim 11 is rejected under 35 U.S.C. § 102(e) as being anticipated by..." rather than "Claim 11 is rejected under 35 U.S.C. § 103(a) as being obvious over..."

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NOTE

Applicants request that the Examiner notify the undersigned attorney when the Examiner takes up this case for further review and examination. Applicants desire to have a telephone interview with the Examiner if the present amendment does not place the application in condition for allowance. Therefore, if the Examiner intends to issue an Office Action rejecting any of the claims as amended, it is respectfully requested that the Examiner first call the undersigned attorney prior to issuing an Office Action so that a telephone interview can be arranged.

Respectfully submitted,


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